

### **REMARKS**

The Examiner rejected claims 1-4, 7, 8 and 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Robinson *et al.* (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ‘97, Volume 16, Number 3 - [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk *et al.* (hereinafter “Musk”), US 6,148,260 continuation filed 11/8/1996.

The Examiner rejected claims 5-6, 9, 18-25 and 31-38 under 35 U.S.C. §103(a) as allegedly being unpatentable over Robinson *et al.* (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ‘97, Volume 16, Number 3 - [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk *et al.* (hereinafter “Musk”), US 6,148,260 continuation filed 11/8/1996 and Thompson *et al.* (hereinafter “Thompson”), US 5,986,401 patented 11/16/1999.

Applicants respectfully traverse the §103 rejections with the following arguments.

**35 U.S.C. §103(a)**

**Claims 1-4, 7, 8 and 10**

The Examiner rejected claims 1-4, 7, 8 and 10 under 35 U.S.C. §103(a) as allegedly being unpatentable over Robinson *et al.* (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ‘97, Volume 16, Number 3 - [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk *et al.* (hereinafter “Musk”), US 6,148,260 continuation filed 11/8/1996.

Applicant respectfully contends that claim 1 is not unpatentable over Robinson in view of Musk, because Robinson in view of Musk does not teach or suggest each and every feature of claim 1.

As a first example of why claim 1 is not unpatentable over Robinson in view of Musk, Robinson in view of Musk does not teach or suggest the feature: “defining the referenced item in the electronic document, **said electronic document not being derived from the physical document**; determining geographic coordinates of the referenced item; defining the geographic link to the physical document; and encoding the geographic coordinates in the geographic link” (emphasis added).

The Examiner argues: “**Robinson teaches wherein the electronic document is not derived from the physical document in section 4.1.** Robinson describes here that animated documents are created with a fairly conventional WYSIWYG editor. Thus, the electronic document is created with electronic document editing software and thus is not necessarily

derived from a physical document. Robinson does disclose further than the electronic document can additionally be derived by scanning conventional printed documents, however this is in addition to creating the electronic document via electronic document creation software” (emphasis added).

In response, Applicant respectfully contends that Section 4.1 of Robinson first describes the use of a conventional WYSIWYG editor to create an animated document as is known in the prior art: “Animated documents are created with a fairly conventional WYSIWYG editor. Text and diagrams are entered and amended in the usual way, building up a collection of rendering information in primary pseudo-window leaves.”

Robinson does not disclose that such a conventional WYSIWYG editor is used to create animated documents for Robinson’s Registry in the absence of a corresponding physical document from which the electronic animated document is derived. Indeed, Robinson, Section 4.1 further recites: “One version of the editor actually operates on the DigitalDesk, which means that text, diagrams and interactors from other printed documents can be copied into the new document. If the other printed documents are active documents known to the system, this copying is entirely digital, just as it would be in a conventional word processor.”

In other words, Robinson does not disclose the use of a conventional WYSIWYG editor independent of a physical document from which the electronic animated document is derived, as confirmed by the following recitation the first paragraph of Robinson, Section 3: “The registry provides the central directory service for animated paper documents. **It stores the image of each active document** and the code of any interactors, together with cross references between these and indexes to identify them” (emphasis added). Since the registry stores **the image of each**

**active document**, there is no electronic animated document in the Registry that is not derived from an associated physical document. Therefore, any use of the conventional WYSIWYG editor to create an animated document for the Registry generates content in the animated document that is derived from the corresponding physical document.

Moreover, the preceding quote from Section 3 of Robinson recites that the Register stores the cross references between the stored image (i.e., the electronic document in the Registry) and its associated physical document. Therefore, the referenced item in an animated document in the Registry, even if created by a conventional WYSIWYG editor, requires that the animated document be derived from the corresponding physical document as a prerequisite for considering the possibility of satisfying the following limitations of claim 1: “determining geographic coordinates of the referenced item; defining the geographic link to the physical document; and encoding the geographic coordinates in the geographic link”.

Furthermore, the Examiner admits: “An electronic document and physical document work in tandem in the DigitalDesk to create and animated document.”

As a second example of why claim 1 is not unpatentable over Robinson in view of Musk, Robinson in view of Musk does not teach or suggest the feature: “determining geographic coordinates of the referenced item; defining the geographic link to the physical document; and **encoding the geographic coordinates in the geographic link**” (emphasis added).

As to encoding the coordinates of the referenced item of the electronic document in the link to the physical document, the Examiner argues: “Robinson teaches determining the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson teaches defining a link to the

physical document in sections 3, 4, 4.1, and 4.4. Robinson teaches encoding the absolute coordinates in the link in sections 3 and 4.4.”

In response, Applicant respectfully contends that Sections 3 and 4.4 of Robinson do not disclose said encoding the absolute coordinates in the link to the physical document as alleged by the Examiner.

Applicant notes the only mention of co-ordinates in Section 3 of Robinson is : “The page representation acts as an index identifying the interactor corresponding to particular **co-ordinates** on a page” (emphasis added), which most certainly does not disclose encoding the coordinates of the referenced item of the electronic document in the link to the physical document as required by claim 1.

Applicant notes the only mention of co-ordinates in Section 4.4 of Robinson is “ The page's identifier and the **co-ordinates** of the link are looked up in the registry to yield the appropriate activity and the results projected back onto the desk” (emphasis added), which most certainly does not disclose encoding the coordinates of the referenced item of the electronic document in the link to the physical document as required by claim 1. In other words, storing the coordinates in the registry does not imply storing the coordinates in the link. The coordintes could be stored anywhere in the registry not within the link and still be accessible.

As a third example of why claim 1 is not unpatentable over Robinson in view of Musk, Robinson in view of Musk does not teach or suggest the feature: “determining **geographic** coordinates of the referenced item; defining the geographic link to the physical document; and encoding the **geographic** coordinates in the geographic link” (emphasis added).

The Examiner argues:

“Robinson does not teach wherein the referenced item is related to a geographic location or wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.”

In response, Applicant first notes that the Examiner’s argument is incompatible with the requirement in claim 1 of “said electronic document not being derived from the physical document”, because the Examiner is arguing that the physical document should be the same map as is the electronic document.

In further response, Applicant contends that Robinson’s invention is not concerned with how the physical and/or electronic document is used in user applications. Rather, the objectives of Robinson’s invention are stated in Robinson’s Abstract as follows:

“This paper describes the framework that has been developed to assist with the preparation and presentation of these mixed-media documents. The central

component is a registry that associates physical locations on pieces of paper with actions. This is surrounded by a number of adaptors that assist with the creation of new documents either from scratch or by translating from conventional hypermedia, and also allow the documents to be edited. Finally the DigitalDesk itself identifies pieces of paper and animates them with the actions described in the registry. ”

Thus, modifying Robinson to “present ... a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map” is unrelated to, and does not support, the objectives of the Robinson invention, and is therefore not obvious.

Based on the preceding arguments, Applicants respectfully maintain that claim 1 is not unpatentable over Robinson in view of Musk, and that claim 1 is in condition for allowance. Since claims 2-4, 7, 8 and 10 depend from claim 1, Applicants contend that claims 2-4, 7, 8 and 10 are likewise in condition for allowance.

In addition with respect to claim 2, Robinson in view of Musk does not teach or suggest the feature: “wherein the step of encoding further includes the step of encoding an address of a second electronic document in the geographic link”.

The Examiner argues: “Regarding dependent claim 2, Robinson teaches encoding an address of a second electronic document in the link in sections 3, 4, 4.1, and 4.4. The electronic document paired with the paper document contains hybrid links composed of the interactor coordinates and the associated target location stored in the registry to point to other electronic

resources such as other electronic documents.”

In response, Applicant cannot find any disclosure anywhere in Robinson of a geographic link that includes both geographic coordinates and an address of a second electronic document. Since the Examiner has identified anything in Robinson disclosing a geographic link that includes both geographic coordinates and an address of a second electronic document, Applicant maintains that the Examiner has not established a *prima facie* case of obviousness in relation to claim 2.

In addition with respect to claim 4, Robinson in view of Musk does not teach or suggest the feature: “storing the geographic coordinates in a table”.

The Examiner argues: “Robinson teaches storing the coordinates in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page.”

In response, Applicants contend that the coordinates are stored in the registry (see Robinson, section 4.4). However, Robinson does not teach that the coordinates are stored in a table. Applicants contend that a table is only one storage format of a multiplicity of storage format that could be used to store data. Applicants have searched the text of Robinson and have found that the word “table” does not appear anywhere within the text of Robinson. Applicants request that the Examiner identify a specific quote from Robinson that allegedly teaches that the coordinates are stored in a table.

In addition with respect to claim 7, Robinson in view of Musk does not teach or suggest



the feature: “the physical document includes a map”.

The Examiner argues: “Regarding dependent claim 7, Robinson does not teach wherein the referenced item is related to a geographic location; the absolute coordinates include geographic coordinates; and wherein the physical document includes a map. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area.... It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson.”

In response, Applicants contend that Robinson’s invention is not concerned with how the physical and/or electronic document is used in user applications. Rather, the objectives of Robinson’s invention are stated in Robinson’s Abstract as follows:

“This paper describes the framework that has been developed to assist with the preparation and presentation of these mixed-media documents. The central component is a registry that associates physical locations on pieces of paper with actions. This is surrounded by a number of adaptors that assist with the creation of

new documents either from scratch or by translating from conventional hypermedia, and also allow the documents to be edited. Finally the DigitalDesk itself identifies pieces of paper and animates them with the actions described in the registry. ”

Thus, modifying Robinson such that “the physical document includes a map” is unrelated to, and does not support, the objectives of the Robinson invention, and is therefore not obvious.

In addition with respect to claim 8, Applicants respectfully contend that Robinson does not teach the feature: “the electronic document is a hyper text markup language document; and the geographic link uses syntactic conventions of hyper text markup language”.

The Examiner argues: “Regarding dependent claim 8, Robinson teaches wherein the electronic document is a hyper text markup language document and wherein the link uses syntactic conventions of hyper text markup language in the abstract and sections 4, 4.1, and 4.4.”.

In response, Applicants contend that a search of the text of Robinson shows that Robinson does not teach “syntactic conventions of hyper text markup language” and never even mentions “hyper text markup language”. Applicants maintain that the abstract and sections 4, 4.1, and 4.4 in Robinson do not teach or suggest the preceding feature of claim 8 as alleged by the Examiner.

In addition with respect to claim 10, Robinson in view of Musk does not teach or suggest the feature: “wherein the geographic coordinates include longitude and latitude”.

The Examiner argues: “Regarding dependent claim 10, Robinson does not teach wherein the geographic coordinates include longitude and latitude. Musk does teach wherein the

geographic coordinates include longitude and latitude in col. 3 lines 42-44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the longitude and latitude geographic coordinates to have improved Robinson so that the map paper document could have been used and interacted with using the DigitalDesk. Robinson teaches absolute coordinates relating to reference items on the document, but not longitude and latitude geographic coordinates, because Robinson does not specifically discuss a map example. It would have been obvious and desirable to have enhanced a traditional paper map document with the electronic reference information as taught by Robinson and Musk so that a user could have received detailed information about businesses and services available in the area displayed by the map..”

In response, Applicants contend that Robinson’s invention is not concerned with how the physical and/or electronic document is used in user applications. Rather, the objectives of Robinson’s invention are stated in Robinson’s Abstract as follows:

“This paper describes the framework that has been developed to assist with the preparation and presentation of these mixed-media documents. The central component is a registry that associates physical locations on pieces of paper with actions. This is surrounded by a number of adaptors that assist with the creation of new documents either from scratch or by translating from conventional hypermedia, and also allow the documents to be edited. Finally the DigitalDesk itself identifies pieces of paper and animates them with the actions described in the registry. ”

Thus, modifying Robinson such that “the geographic coordinates include longitude and latitude” is unrelated to, and does not support, the objectives of the Robinson invention, and is therefore

not obvious.

#### Claims 5-6 and 9

The Examiner rejected claims 5-6 and 9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Robinson *et al.* (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ‘97, Volume 16, Number 3 - [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk *et al.* (hereinafter “Musk”), US 6,148,260 continuation filed 11/8/1996 and Thompson *et al.* (hereinafter “Thompson”), US 5,986,401 patented 11/16/1999.

Since claims 5-6 and 9 depend from claim 1, which Applicants have argued *supra* to not be unpatentable over Robinson in view of Musk under 35 U.S.C. §103(a), Applicants maintain that claims 5-6 and 9 are likewise not unpatentable over Robinson in view of Musk and Thompson under 35 U.S.C. §103(a).

In addition with respect to claim 5, Robinson in view of Musk and Thompson does not teach or suggest the feature: “computing foil coordinates on an opto-touch foil from the geographic coordinates of the referenced item and a calibration relationship, said opto-touch foil being aligned on the physical document, said calibration relationship being between geographic coordinates of a selected calibration location and calibration foil coordinates of the selected calibration location on the opto-touch foil, said selected calibration point having been selected from the electronic document and said opto-touch foil having been selectively touched or pressed

at a position corresponding to where the calibration location appears in the physical document”.

The Examiner argues: “Regarding dependent claim 5, Robinson teaches computing camera coordinates from the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson teaches a calibration relationship, the desk being aligned with the physical document, and the calibration relationship being between the absolute coordinates of a selected calibration location and calibration camera coordinates of the selected calibration location on the desk, the selected calibration point having been selected from the electronic document and the desk having been selectively activated at a position corresponding to where the calibration location appears in the physical document in section 4.2. Robinson does not teach computing foil coordinates because Robinson uses a camera location system instead of a touch foil system. However, Robinson does teach the possibility of using a touch foil to identify coordinates instead of a camera in section 5. Thus, Robinson teaches that foil coordinates could have been implemented in place of camera coordinates.”

In response, Applicant contends that there is no disclosure in Robinson of any calibration relationship, and specifically there is no disclosure in Robinson of the claimed calibration relationship between geographic coordinates of a selected calibration location and calibration foil coordinates of the selected calibration location on the opto-touch foil. The Examiner has not cited anything in Robinson to support the Examiner’s allegations about said calibration relationship in Robinson.

The Examiner further argues: “Robinson does not teach use of an opto-touch foil because Robinson uses a camera projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in

section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson”.

In response, Applicants contend that the Examiner’s suggestion of using the touch foil instead of a camera in Robinson is not persuasive. Robinson does not teach use of a touch foil system in place of a camera as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of a touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

In addition, the Examiner has based the Examiner’s argument for utilizing Thompson under the false assumption that “Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2.” Applicant respectfully maintains that Thompson does not teach a transparent organic LED (TOLED) display for presenting feedback to a user. Rather, Thomson teaches use of a low-reflectance absorber arranged behind the TOLED display in order to allows substantially all light incident on the TOLED display to pass through

the TOLED display and be absorbed by the low-reflectance absorber, in order to improve the contrast of images displayed by the TOLED display (see Thompson, abstract).

Moreover with respect to claim 5, the Examiner's argument for modifying Robinson by Thompson is not motivated by any suggestion in the prior art, but rather has instead been created by the Examiner, and is thus not legally persuasive.

In addition with respect to claim 6, Robinson in view of Musk does not teach or suggest the feature: "storing ... the geographic coordinates in a table".

The Examiner argues: "Robinson teaches ... absolute coordinates in table called a page representation in section 3 and 4.4."

In response, Applicant contends that there is no disclosure in Robinson that teaches or suggests that a page representation in Robinson's registry comprises a table.

In addition with respect to claim 6, Robinson in view of Musk does not teach or suggest the feature: "storing the foil coordinates ... in a table".

The Examiner argues: "Robinson teaches storing camera coordinates ... in table called a page representation in section 3 and 4.4."

In response, Applicant contends that there is no disclosure in Robinson that teaches or suggests that a page representation in Robinson's registry comprises a table.

The Examiner further argues: "Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. However, Robinson does teach the possibility of using a touch foil to identify coordinates instead of a camera in section 5. Thus, Robinson teaches that foil coordinates could have been implemented in place of camera

coordinates.... It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the DigitalDesk system of Robinson to have created the claimed invention using the touch foil teaching of Robinson in section 5. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.”

In response, Applicants contend that the Examiner’s suggestion of using the touch foil instead of a camera in Robinson is not persuasive. Robinson does not teach use of foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of a touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

In addition with respect to claim 9, Robinson in view of Musk does not teach or suggest the feature: “wherein the opto-foil comprises a touch foil and a transparent light emitting foil such that the touch foil is adapted to being directly touched or pressed and the light emitting foil is disposed between the touch foil and the physical document”.

The Examiner argues: “Regarding dependent claim 9, Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. However, Robinson does teach the possibility of using a touch foil



to identify coordinates instead of a camera in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil teaching of Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.”

In response, Applicant contends that the Examiner’s argument is based on use of photo-touch foil coordinates instead of a camera coordinates, which Applicant considers to not be persuasive because Robinson does not teach use of opto-foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of an opto- touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

In addition, the Examiner has based the Examiner’s argument for utilizing Thompson under the false assumption that “Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2.” Applicant respectfully maintains that Thompson does not teach a transparent organic LED (TOLED) display for presenting feedback to a user. Rather, Thomson teaches use of a low-reflectance absorber arranged behind the TOLED

display in order to allow substantially all light incident on the TOLED display to pass through the TOLED display and be absorbed by the low-reflectance absorber, in order to improve the contrast of images displayed by the TOLED display (see Thompson, abstract).

#### Claims 18-25 and 31-38

The Examiner rejected claims 18-25 and 31-38 under 35 U.S.C. §103(a) as allegedly being unpatentable over Robinson *et al.* (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ‘97, Volume 16, Number 3 - [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk *et al.* (hereinafter “Musk”), US 6,148,260 continuation filed 11/8/1996 and Thompson *et al.* (hereinafter “Thompson”), US 5,986,401 patented 11/16/1999.

Applicant respectfully contends that claim 18 is not unpatentable over Robinson in view of Musk and Thompson because Robinson in view of Musk and Thompson does not teach or suggest each and every feature of claim 18.

As a first example of why claims 18 and 31 are not unpatentable over Robinson in view of Musk and Thompson, Robinson in view of Musk and Thompson does not teach or suggest the feature: “calibrating an opto-touch foil that is aligned on the physical document, said calibrating comprising processing a calibration location comprised by a plurality of locations appearing in the physical document and being referred to in an electronic document, said electronic document not being derived from the physical document, each location of the plurality of locations having geographical coordinates, said processing generating a calibration relationship between the

geographic coordinates of the calibration location and calibration foil coordinates of the opto-touch foil, said calibration foil coordinates corresponding to where the calibration location appears in the physical document”.

The Examiner argues: “Regarding independent claim 18, Robinson teaches calibrating a camera-projector system that is aligned on a physical document in fig. 1 and section 4.3. Robinson teaches wherein the calibrating comprises processing a calibration location comprised by a plurality of locations appearing in the physical document and being referred to in an electronic document in section fig. 2 and section 4.2. Robinson teaches that the electronic document is not derived from the physical document in section 4.1. Robinson describes here that animated documents are created with a fairly conventional WYSIWYG editor. Thus, the electronic document is created with electronic document editing software and thus is not necessarily derived from a physical document. Robinson does disclose further than the electronic document can additionally be derived by scanning conventional printed documents, however this is in addition to creating the electronic document via electronic document creation software”.... Robinson teaches wherein each location of the plurality of locations have absolute coordinates, the processing generating a calibration relationship between the absolute coordinates of the calibration location and the calibration camera coordinates of the camera projector system, the calibration camera coordinates corresponding to where the calibration location appears in the physical document in fig. 2 and sections 4.2 and 5.”

In response, Applicant contends that there is no disclosure in Robinson of any calibration relationship, and specifically there is no disclosure in Robinson of the claimed calibration relationship between geographic coordinates of a selected calibration location and calibration foil

coordinates of the selected calibration location on the opto-touch foil. The Examiner has not cited anything in Robinson to support the Examiner's allegations about said calibration relationship in Robinson.

The Examiner further argues: "Robinson does not teach wherein the absolute coordinates include geographic coordinates. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Robinson teaches in the last three sentences of section 1 that its system has been re-engineered for more general use. Maps are traditionally composed of paper and thus would have been a good candidate for the general use DigitalDesk system taught by Robinson."

In further response, Applicant contends that Robinson's invention is not concerned with how the physical and/or electronic document is used in user applications. Rather, the objectives of Robinson's invention are stated in Robinson's Abstract as follows:

"This paper describes the framework that has been developed to assist with the preparation and presentation of these mixed-media documents. The central

component is a registry that associates physical locations on pieces of paper with actions. This is surrounded by a number of adaptors that assist with the creation of new documents either from scratch or by translating from conventional hypermedia, and also allow the documents to be edited. Finally the DigitalDesk itself identifies pieces of paper and animates them with the actions described in the registry. ”

Thus, modifying Robinson to “present ... a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map” is unrelated to, and does not support, the objectives of the Robinson invention, and is therefore not obvious.

The Examiner additionally argues: “Robinson does not teach use of an opto-touch foil because Robinson uses a camera projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson”.

In response, Applicant contends that the Examiner’s argument is based on use of photo-

touch foil coordinates instead of a camera coordinates, which Applicant considers to not be persuasive because Robinson does not teach use of opto-foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of an opto- touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

In addition, the Examiner has based the Examiner’s argument for utilizing Thompson under the false assumption that “Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2.” Applicant respectfully maintains that Thompson does not teach a transparent organic LED (TOLED) display for presenting feedback to a user. Rather, Thomson teaches use of a low-reflectance absorber arranged behind the TOLED display in order to allows substantially all light incident on the TOLED display to pass through the TOLED display and be absorbed by the low-reflectance absorber, in order to improve the contrast of images displayed by the TOLED display (see Thompson, abstract).

As a second example of why claims 18 and 31 are not unpatentable over Robinson in view of Musk and Thompson, Robinson in view of Musk and Thompson does not teach or suggest the feature: “for each location of the plurality of locations, computing foil coordinates of the opto-touch foil corresponding to where each location appears in the physical document, said computing utilizing the geographic coordinates of each location and the calibration relationship”.

The Examiner argues: “Robinson teaches for each location of the plurality of locations, computing camera coordinates of the camera-projector system corresponding to where each location appears in the physical document, the computing utilizing the absolute coordinates of each location and the calibration relationship in fig. 2 and sections 4.2 and 5.”

In response, Applicants respectfully contend that there is no disclosure in Robinson that the the computing of camera coordinates of the camera-projector system corresponding to where each location appears in the physical document utilizes the absolute coordinates of each location and the calibration relationship. For example, such a calibration relationship is not disclosed in Robinson.

Based on the preceding arguments, Applicants respectfully maintain that claim 18 is not unpatentable over Robinson in view of Musk, and that claim 18 is in condition for allowance. Since claims 19-25 depend from claim 18, Applicants contend that claims 19-25 are likewise in condition for allowance. Since claims 32-38 depend from claim 31, Applicants contend that claims 32-38 are likewise in condition for allowance.

In addition with respect to claims 19 and 32, Robinson in view of Musk does not teach or suggest the feature: “storing in a table for each location of the plurality of locations: an identifier of each location, the geographic coordinates of each location, and the foil coordinate of each location”.

The Examiner argues: “Regarding dependent claim 19, Robinson teaches storing an identifier of each location, the absolute coordinates of each location, and the camera coordinates of each location in a table in sections 3 and 4.4. The each page representation in the registry

maintains the associations between the coordinates and the interactors, or reference items, on the page. Robinson teaches storing camera coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Robinson into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.”.

In response, Applicants respectfully contend that there is no disclosure in Robinson that teaches or suggests that a page representation in Robinson’s registry comprises a table.

In addition, Applicants contend that the Examiner’s suggestion of using the touch foil instead of a camera in Robinson is not persuasive. Robinson does not teach use of foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of a touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”



In addition with respect to claims 20 and 35, Robinson in view of Musk does not teach or suggest the feature: “sending the computed foil coordinates to the opto-touch foil to cause illumination of positions upon the opto-touch foil corresponding to where each location of the plurality of locations appears in the physical document”.

The Examiner argues: “Regarding dependent claim 20, Robinson teaches sending coordinates to the projector that illuminates a corresponding position on the physical document responsive to the projector coordinates. Robinson does not teach use foil coordinates or an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil taught by Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.”.

In addition, Applicants respectfully contend that the Examiner’s suggestion of using the touch foil instead of a camera in Robinson is not persuasive. Robinson does not teach use of foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of a touch foil system. In addition, Robinson teaches away from use of a graphics

tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

Moreover, the Examiner has not cited any reference that discloses having an opto-touch foil cause illumination of positions upon the opto-touch foil corresponding to where each location of the plurality of locations appears in the physical document. Also, the Examiner has not provided any evidence from the prior art that provides motivation for having an opto-touch foil cause illumination of positions upon the opto-touch foil corresponding to where each location of the plurality of locations appears in the physical document.

In addition, the Examiner has based the Examiner’s argument for utilizing Thompson under the false assumption that “Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2.” Applicant respectfully maintains that Thompson does not teach a transparent organic LED (TOLED) display for presenting feedback to a user. Rather, Thomson teaches use of a low-reflectance absorber arranged behind the TOLED display in order to allows substantially all light incident on the TOLED display to pass through the TOLED display and be absorbed by the low-reflectance absorber, in order to improve the contrast of images displayed by the TOLED display (see Thompson, abstract).

In addition with respect to claims 21 and 36, Robinson in view of Musk does not teach or suggest the feature: “responsive to a first location of the plurality of locations being selected in the electronic document, sending the foil coordinates of the first location to the opto-touch foil to cause blinking of light at a first position upon the opto-touch foil corresponding to where the first

location appears in the physical document”.

The Examiner argues: “Regarding dependent claim 21, Robinson teaches responsive to a first location of the plurality of locations being selected in the electronic document, sending the coordinates of the first location to the camera-projector system to cause an animation, which **could be** a blinking of light, at a first position upon the DigitalDesk corresponding to where the first location appears in the physical document in sections 3, 4.3, and 5” (emphasis added).

In response, Applicants respectfully maintain that the Examiner’s contention that an animation in Robinson “could be a blinking light” is speculative and thus not persuasive for demonstrating that Robinson teaches or suggests having “an opto-touch foil to cause blinking of light at a first position upon the opto-touch foil corresponding to where the first location appears in the physical document”

In addition with respect to claims 22 and 33, Robinson in view of Musk does not teach or suggest the feature: “storing an address of a second electronic document in the table”.

The Examiner argues: “Regarding dependent claim 22, Robinson teaches storing an address of a second electronic document in the table in sections 3 and 4.4.”.

In response, Applicants respectfully contend that the preceding argument by the Examiner is incorrect, because Robinson does not teach storing an address of a second electronic document in the table in sections 3 and 4.4.

In addition with respect to claims 24 and 35, Robinson in view of Musk does not teach or suggest the feature: “wherein the opto-foil comprises a touch foil and a transparent light emitting

foil such that the touch foil is adapted to being directly touched or pressed and the light emitting foil is disposed between the touch foil and the physical document”.

The Examiner argues: “Regarding dependent claims 24, Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Robinson teaches the consideration of a touch foil alternate position sensing system in section 5. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Thompson and Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil teaching of Robinson and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.”

In response, Applicants respectfully contend that the Examiner’s suggestion of using the touch foil instead of a camera in Robinson is not persuasive. Robinson does not teach use of foil coordinates in place of camera coordinates as alleged by the Examiner, but instead teaches that a graphics tablet could be used. Applicant maintains that a use of a graphics tablet does not imply or require use of a touch foil system. In addition, Robinson teaches away from use of a graphics tablet by reciting in the third paragraph of Robinson, Section 5: “It would be possible to use a conventional graphics tablet, but the light pen has the advantage that it works perfectly well over a stack of paper on the desk.”

In addition, the Examiner has based the Examiner’s argument for utilizing Thompson under

the false assumption that “Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2.” Applicant respectfully maintains that Thompson does not teach a transparent organic LED (TOLED) display for presenting feedback to a user. Rather, Thomson teaches use of a low-reflectance absorber arranged behind the TOLED display in order to allow substantially all light incident on the TOLED display to pass through the TOLED display and be absorbed by the low-reflectance absorber, in order to improve the contrast of images displayed by the TOLED display (see Thompson, abstract).

In addition with respect to claims 25 and 38, Robinson in view of Musk does not teach or suggest the feature: “responsive to the opto-touch foil being pressed or touched at a first position corresponding to where a first location of the plurality of locations appears in the physical document, causing a blinking of light at the first position and highlighting the first location in the electronic document”.

The Examiner argues: “Regarding dependent claim 25, Robinson teaches responsive to the DigitalDesk being activated at a first position corresponding to where a first location of the plurality of locations appears in the physical document, causing an animation, which **could be** a blinking of light, at the first position and highlighting the first position in the electronic document in sections 3, 4.3, and 5” (emphasis added).

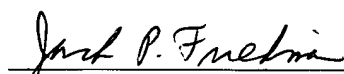
In response, Applicants respectfully maintain that the Examiner’s contention that an animation in Robinson “could be a blinking light” is speculative and thus not persuasive for demonstrating that Robinson teaches or suggests “responsive to the opto-touch foil being pressed or touched at a first position corresponding to where a first location of the plurality of locations

appears in the physical document, causing a blinking of light at the first position and highlighting the first location in the electronic document.”

## CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account No. 09-0457.

Date: 12/30/2005



Jack P. Friedman

Registration No. 44,688

Schmeiser, Olsen & Watts  
3 Lear Jet Lane, Suite 201  
Latham, New York 12110  
(518) 220-1850